

U.S. Fish & Wildlife Service

National Wildlife Refuge System

The Air We Breathe

Air quality is important, not only to our health, but also to the health of fish, wildlife and plant species, and the habitats that they depend on. Did you ever stop to think what's in the air we breathe? Ozone, sulfur dioxide, nitrogen oxides, volatile organic compounds, dust, and soot, are just a few of the air pollutants that can harm our health and the environment. For example, ozone can cause respiratory problems in humans and leaf injury in plants. Unlike ozone in the stratosphere (6-8 miles above the Earth's surface), which protects life from the sun's harmful radiation, ground level ozone is human caused, forming when nitrogen oxides and volatile organic compounds react in sunlight. Acid rain, caused by sulfur dioxide and nitrogen oxides combining with moisture, is harmful to plants, rivers, lakes, and the

creatures they support. Excess nitrogen from pollution causes nuisance algae blooms and loss of sea grasses, important to young fish, crabs, and other wildlife, in coastal areas. Fossil fuel-fired power plants, industry, and motor vehicles are the primary sources of air pollutants.

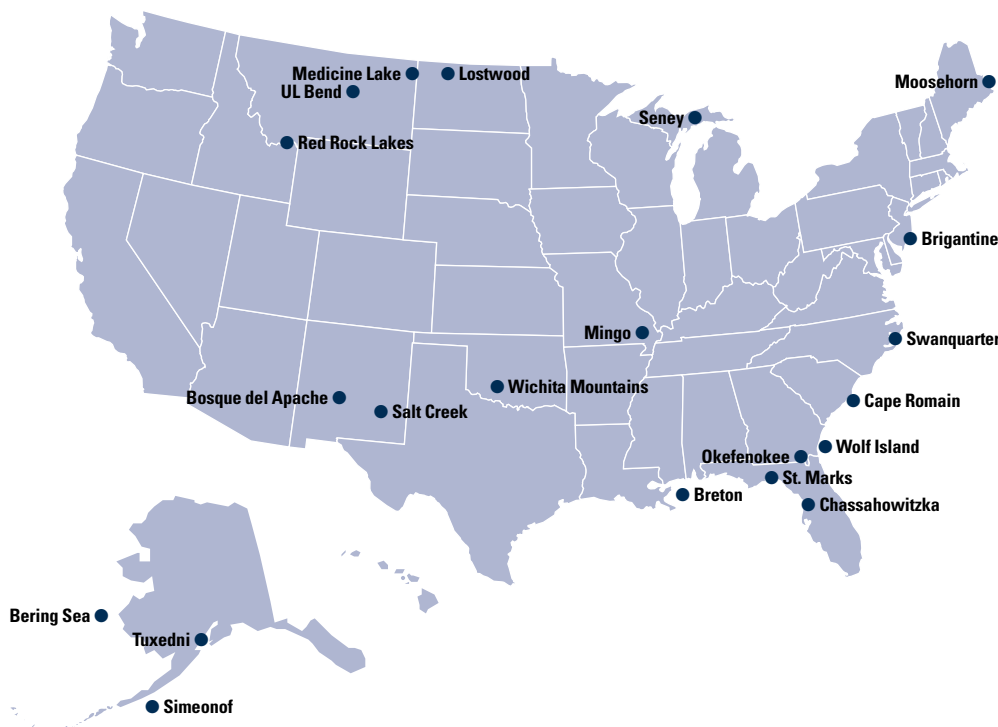
Air pollutants also affect how well and how far we can see. Haze, caused by fine particles, limits our viewing distance and dull colors and textures of scenic features. Sulfate, nitrate, and carbon particles are the primary components of haze. Humidity, windblown soil, and soot can also affect visibility.

Proper management of air resources is vital to protecting and maintaining Fish and Wildlife Service resources. The Division of Refuges, Air Quality Branch,

is responsible for protecting air quality in support of ecosystem management in the National Wildlife Refuge System. Of particular importance is the management of air quality in lands designated as *Class 1* areas under the Clean Air Act, meaning they receive the highest levels of protection. *Class 1* areas are those areas that have been designated as wilderness areas over 5,000 acres in size as of 1977, when the Clean Air Act was passed. This applies to 21 Fish and Wildlife Service areas, 88 Forest Service areas, and 48 National Park Service areas.

Of the over 500 national wildlife refuges, wildernesses, and thousands of waterfowl production areas that make up our National Wildlife Refuge System, the 21 areas designated *Class 1* are: Bering Sea, AK; Bosque del Apache, NM; Breton, LA; Brigantine, NJ; Cape Romain, SC; Chassahowitzka, FL; Lostwood, ND; Medicine Lake, MT; Mingo, MO; Moosehorn, ME; Okefenokee, GA; Red Rock Lakes, MT; Salt Creek, NM; St. Marks, FL; Seney, MI; Simeonof, AK; Swanquarter, NC; Tuxedni, AK; UL Bend, MT; Wichita Mountains, OK; and Wolf Island, GA.

U.S. Fish & Wildlife Service Class 1 Areas



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